

FORM  
2A

Rev  
08/13

State of Colorado  
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203  
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:

400489294

Date Received:

12/11/2013

Oil and Gas Location Assessment

☒ New Location    ☐ Refile    ☐ Amend Existing Location    Location#: \_\_\_\_\_

Submit signed original form. This Oil and Gas Location Assessment is to be submitted to the COGCC for approval prior to any ground disturbance activity associated with oil and gas operations. Approval of this Oil and Gas Location Assessment will allow for the construction of the below specified Location; however, it does not supersede any land use rules applied by the local land use authority. Please see the COGCC website at <http://cogcc.state.co.us/> for all accompanying information pertinent this Oil and Gas Location Assessment.

Location ID:

**436054**

Expiration Date:

**02/07/2017**

☒ This location assessment is included as part of a permit application.

CONSULTATION

- ☐ This location is included in a Comprehensive Drilling Plan. CDP # \_\_\_\_\_
- ☐ This location is in a sensitive wildlife habitat area.
- ☐ This location is in a wildlife restricted surface occupancy area.
- ☐ This location includes a Rule 306.d.(1)A.ii. variance request.

Operator

Operator Number: 46685

Name: KINDER MORGAN CO2 CO LP

Address: 17801 HWY 491

City: CORTEZ    State: CO    Zip: 81321

Contact Information

Name: Carolyn Dunmire

Phone: (970) 564-9100

Fax: (970) 565-8874

email: dunmire@ecosphere-services.com

RECLAMATION FINANCIAL ASSURANCE

☒ Plugging and Abandonment Bond Surety ID: 20110027    ☐ Gas Facility Surety ID: \_\_\_\_\_

☐ Waste Management Surety ID: \_\_\_\_\_

LOCATION IDENTIFICATION

Name: CN    Number: 4

County: MONTEZUMA

QuarterQuarter: SEnw    Section: 36    Township: 39N    Range: 19W    Meridian: N    Ground Elevation: 6813

Define a single point as a location reference for the facility location. When the location is to be used as a well site then the point shall be a well location.

Footage at surface: 2424 feet FNL from North or South section line

2402 feet FWL from East or West section line

Latitude: 37.596250    Longitude: -108.895050

PDOP Reading: 1.8    Date of Measurement: 09/26/2013

Instrument Operator's Name: R.J. Caffey

## RELATED REMOTE LOCATIONS

(Enter as many Related Locations as necessary. Enter the Form 2A document # only if there is no established COGCC Location ID#)

This proposed Oil and Gas Location is:

LOCATION ID # FORM 2A DOC #

## FACILITIES

Indicate the number of each type of oil and gas facility planned on location

Wells	<u>1</u>	Oil Tanks	<u>      </u>	Condensate Tanks	<u>      </u>	Water Tanks	<u>      </u>	Buried Produced Water Vaults	<u>      </u>
Drilling Pits	<u>      </u>	Production Pits	<u>      </u>	Special Purpose Pits	<u>      </u>	Multi-Well Pits	<u>      </u>	Temporary Large Volume Above Ground Tanks	<u>      </u>
Pump Jacks	<u>      </u>	Separators	<u>      </u>	Injection Pumps	<u>      </u>	Cavity Pumps	<u>      </u>		
Gas or Diesel Motors	<u>      </u>	Electric Motors	<u>      </u>	Electric Generators	<u>      </u>	Fuel Tanks	<u>      </u>	Gas Compressors	<u>      </u>
Dehydrator Units	<u>      </u>	Vapor Recovery Unit	<u>      </u>	VOC Combustor	<u>      </u>	Flare	<u>      </u>	LACT Unit	<u>      </u>
								Pigging Station	<u>      </u>

## OTHER FACILITIES

Other Facility Type

Number

<input type="text"/>	<input type="text"/>
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Per Rule 303.b.(3)C, description of all oil, gas, and/or water pipelines:

Detailed information associated with this pipeline are still in the planning stages. The pipeline will have the following characteristics:

Diameter: 10"  
Material: Carbon Steel with HDPE Liner  
Fluids: CO2 and Water

## CONSTRUCTION

Date planned to commence construction: 02/03/2014 Size of disturbed area during construction in acres: 5.62  
Estimated date that interim reclamation will begin: 08/04/2014 Size of location after interim reclamation in acres: 1.00  
Estimated post-construction ground elevation: 6812

## DRILLING PROGRAM

Will a closed loop system be used for drilling fluids: Yes

Is H<sub>2</sub>S anticipated? Yes

Will salt sections be encountered during drilling: Yes

Will salt based mud (>15,000 ppm Cl) be used? Yes

Will oil based drilling fluids be used? Yes

## DRILLING WASTE MANAGEMENT PROGRAM

Drilling Fluids Disposal: OFFSITE Drilling Fluids Disposal Method: UIC Disposal

Cutting Disposal: OFFSITE Cuttings Disposal Method: Other

Other Disposal Description:

Montezuma County Land Fill.

Beneficial reuse or land application plan submitted?       

Reuse Facility ID:        or Document Number:       

Centralized E&P Waste Management Facility ID, if applicable:

## SURFACE & MINERALS & RIGHT TO CONSTRUCT

Name: Leroy Oliver

Phone: 970-562-4899

Address: 8494 Road CC

Fax: \_\_\_\_\_

Address: \_\_\_\_\_

Email: \_\_\_\_\_

City: Pleasant View State: CO Zip: 81331

Surface Owner: ☒ Fee ☐ State ☐ Federal ☐ Indian

Check all that apply. The Surface Owner: ☐ is the mineral owner

☐ is committed to an oil and Gas Lease

☐ has signed the Oil and Gas Lease

☐ is the applicant

The Mineral Owner beneath this Oil and Gas Location is: ☒ Fee ☐ State ☐ Federal ☐ Indian

The Minerals beneath this Oil and Gas Location will be developed from or produced to this Oil and Gas Location: Yes

The right to construct this Oil and Gas Location is granted by: Bond

Surface damage assurance if no agreement is in place: Blanket Surface Surety ID: 20080051

Date of Rule 306 surface owner consultation 09/12/2013

## CURRENT AND FUTURE LAND USE

Current Land Use (Check all that apply):

Crop Land: ☐ Irrigated ☒ Dry land ☐ Improved Pasture ☐ Hay Meadow ☐ CRP

Non-Crop Land: ☐ Rangeland ☐ Timber ☐ Recreational ☐ Other (describe): \_\_\_\_\_

Subdivided: ☐ Industrial ☐ Commercial ☐ Residential

Future Land Use (Check all that apply):

Crop Land: ☐ Irrigated ☒ Dry land ☐ Improved Pasture ☐ Hay Meadow ☐ CRP

Non-Crop Land: ☐ Rangeland ☐ Timber ☐ Recreational ☐ Other (describe): \_\_\_\_\_

Subdivided: ☐ Industrial ☐ Commercial ☐ Residential

## CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building: 2840 Feet  
Building Unit: 3404 Feet  
High Occupancy Building Unit: 5280 Feet  
Designated Outside Activity Area: 5280 Feet  
Public Road: 2843 Feet  
Above Ground Utility: 2824 Feet  
Railroad: 5280 Feet  
Property Line: 258 Feet

### INSTRUCTIONS:

- All measurements shall be provided from center of nearest Well or edge of nearest Production Facility to nearest of each cultural feature as described in Rule 303.b.(3)A.  
- Enter 5280 for distance greater than 1 mile.  
- Building - nearest building of any type. If nearest Building is a Building Unit, enter same distance for both.  
- Building Unit, High Occupancy Building Unit, and Designated Outside Activity Area - as defined in 100-Series Rules.

## DESIGNATED SETBACK LOCATION INFORMATION

Check all that apply. This location is within a: ☐ Buffer Zone  
☐ Exception Zone  
☐ Urban Mitigation Area

- Buffer Zone - as described in Rule 604.a.(2), within 1,000' of a Building Unit.  
- Exception Zone - as described in Rule 604.a.(1), within 500' of a Building Unit.  
- Urban Mitigation Area - as defined in 100-Series Rules.

Pre-application Notifications (required if location is within 1,000 feet of a building unit):

Date of Rule 305.a.(1) Urban Mitigation Area Notification to Local Government: \_\_\_\_\_

Date of Rule 305.a.(2) Buffer Zone Notification to Building Unit Owners: \_\_\_\_\_

## SOIL

List all soil map units that occur within the proposed location. attach the National Resource Conservation Service (NRCS) report showing the "Map Unit Description" report listing the soil typical vertical profile. This data is to be used when segregating topsoil.

The required information can be obtained from the NRCS web site at <http://soildatamart.nrcs.usda.org/> or from the COGCC web site GIS Online map page found at <http://colorado.gov/cogcc>. Instructions are provided within the COGCC web site help section.

NRCS Map Unit Name: Map Unit 144 - Wetherill loam, 3 to 6 percent slopes

NRCS Map Unit Name: \_\_\_\_\_

NRCS Map Unit Name: \_\_\_\_\_

## PLANT COMMUNITY:

Complete this section only if any portion of the disturbed area of the location's current land use is on non-crop land.

Are noxious weeds present: Yes ☐ No ☒

Plant species from: ☐ NRCS or, ☒ field observation Date of observation: 10/13/2013

List individual species: \_\_\_\_\_

Check all plant communities that exist in the disturbed area.

- ☐ Disturbed Grassland (Cactus, Yucca, Cheatgrass, Rye)  
☐ Native Grassland (Bluestem, Grama, Wheatgrass, Buffalograss, Fescue, Oatgrass, Brome)  
☐ Shrub Land (Mahogany, Oak, Sage, Serviceberry, Chokecherry)  
☐ Plains Riparian (Cottonwood, Willow, Aspen, Maple, Poplar, Russian Olive, Tamarisk)  
☐ Mountain Riparian (Cottonwood, Willow, Blue Spruce)  
☐ Forest Land (Spruce, Fir, Ponderosa Pine, Lodgepole Pine, Juniper, Pinyon, Aspen)  
☐ Wetlands Aquatic (Bullrush, Sedge, Cattail, Arrowhead)  
☐ Alpine (above timberline)  
☐ Other (describe): \_\_\_\_\_

## WATER RESOURCES

Is this a sensitive area: ☒ No ☐ Yes

Distance to nearest

downgradient surface water feature: 2690 Feet

water well: 3428 Feet

Estimated depth to ground water at Oil and Gas Location 250 Feet

Basis for depth to groundwater and sensitive area determination:

Depth to groundwater is determined by using depth recordings from nearby well permit applications on file with the Colorado Division of Water Resources.

Sensitive Area Determination:

There is no water source within 1,000 ft. of the CN-4 well. The CN-4 well is not within a local wellhead protection area, is greater than 1/8 mile from a domestic water well, and is greater than 1/4 mile from a public water supply well, ground water basin, or surface water supply area.

Is the location in a riparian area: ☒ No ☐ Yes

Was an Army Corps of Engineers Section 404 permit filed ☒ No ☐ Yes If yes attach permit.

Is the location within a Rule 317B Surface Water Supply Area buffer No  
zone:

If the location is within a Rule 317B Surface Water Supply Area buffer have all public water supply systems within 15 miles been notified: \_\_\_\_\_

## GROUNDWATER BASELINE SAMPLING AND MONITORING AND WATER WELL SAMPLING

Water well sampling required per Rule 609

## DESIGNATED SETBACK LOCATION EXCEPTIONS

Check all that apply:

- ☐ Rule 604.a.(1)A. Exception Zone (within 500' of Building Unit)
- ☐ Rule 604.b.(1)A. Exception Location (existing or approved Oil & Gas Location now within a Designated Setback as a result of Rule 604.a.)
- ☐ Rule 604.b.(1)B. Exception Location (existing or approved Oil & Gas Location is within a Designated Setback due to Building Unit construction after Location approval)
- ☐ Rule 604.b.(2) Exception Location (SUA or site-specific development plan executed on or before August 1, 2013)
- ☐ Rule 604.b.(3) Exception Location (Building Units constructed after August 1, 2013 within setback per an SUA or site-specific development plan)

## RULE 502.b VARIANCE REQUEST

☐ Rule 502.b. Variance Request from COGCC Rule or Spacing Order Number \_\_\_\_\_

ALL exceptions and variances require attached Request Letter(s). Refer to applicable rule for additional required attachments (e.g. waivers, certifications, SUAs).

## OPERATOR COMMENTS AND SUBMITTAL

Comments

There are no registered water wells, seeps, or springs within a 1/2 mile radius of the proposed CN-4 CO2 well limit of disturbance. A Form 4 will be filed accordingly.

A Surface Use Agreement is currently being developed. Historic leases are attached, however the surface owner is not the mineral owner. The well will be bonded until the SUA is finalized.

Kinder Morgan CO2 Company may install glycol injection equipment on the well location, to address hydrate formation/line obstruction due to freezing. The tanks would be filled by a supply truck every 7 to 10 days, and would be operated between mid-October and June as weather conditions dictate. When not in operation, the skids would either remain installed on location, or be removed from the well location and stored during the off-season to protect them from potential vandalism as determined necessary by Kinder Morgan. The pumps are fairly quiet and should not be audible outside of the well pad area. A plot plan of the glycol skid equipment is attached.

No visible improvements within 500' of the well pad disturbance.

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct and complete.

Signed: \_\_\_\_\_ Date: 12/11/2013 Email: dunmire@ecosphere-services.com

Print Name: Carolyn Dunmire Title: Sr. Project Manager

Based on the information provided herein, this Application for Permit-to-Drill complies with COGCC Rules and applicable orders and is hereby approved.

COGCC Approved: Matthew Lee Director of COGCC Date: 2/8/2014

### **Conditions Of Approval**

**All representations, stipulations and conditions of approval stated in this Form 2A for this location shall constitute representations, stipulations and conditions of approval for any and all subsequent operations on the location unless this Form 2A is modified by Sundry Notice, Form 4 or an Amended Form 2A.**

COA Type	Description
	<p>Operator shall pressure test pipelines in accordance with Rule 1101.e.(1) prior to putting into initial service any temporary surface or permanent buried pipelines and following any reconfiguration of the pipeline network. Operator shall notify the COGCC Oil and Gas Location Assessment (OGLA) Specialist for Western Colorado (Dave Kubeczko; email dave.kubeczko@state.co.us) and the COGCC Field Inspector for Southwest Colorado (Steve Labowski email steve.labowski@state.co.us) 48 hours prior to testing surface poly/steel or buried poly/steel pipelines.</p> <p>Operator will utilize, to the extent practical, all existing access and other public roads, and/or existing pipeline right-of-ways, when placing/routing any surface or buried pipelines. This will reduce surface disturbance and fragmentation of wildlife habitat in the area.</p>
	<p>Operator must implement best management practices to contain any unintentional release of fluids, including any fluids conveyed via temporary surface pipelines or buried permanent pipelines.</p> <p>Operator must ensure secondary containment for any volume of fluids contained at well site during drilling and completion operations (as described in and shown on the Proposed BMPs attachment); including, but not limited to, construction of a berm or diversion dike, diversion/collection trenches within and/or outside of berms/dikes, site grading, or other comparable measures (i.e., best management practices (BMPs) associated with stormwater management) sufficiently protective of nearby surface water. Any berm constructed at the well pad location will be stabilized, inspected at regular intervals (at least every 14 days), and maintained in good condition.</p> <p>All tanks and aboveground vessels containing fluids or chemicals used in the storage and transmission processes and operations must have secondary containment structures (which may include, but is not limited to, double-walled tanks, built-in containment). All separate secondary containment structures/areas must be lined. The construction and lining of the secondary containment structures/areas (if necessary) shall be supervised by a professional engineer or their agent.</p> <p>Additional containment shall be required where temporary or permanent pumps and other necessary equipment or chemicals are located.</p>
	<p>Notify the COGCC 48 hours prior to start of pad construction, rig mobilization, spud, and start of hydraulic stimulation operations using Form 42 (the appropriate COGCC individuals will automatically be email notified, including the LGD for hydraulic stimulation operations).</p> <p>All personnel must be H2S trained and proper air monitoring for H2S must be implemented during drilling, completion, and production operations. Emergency response plan for H2S must be onsite at all times.</p> <p>As required for Groundwater Baseline Sampling; Operator shall comply with Rule 609. STATEWIDE GROUNDWATER BASELINE SAMPLING AND MONITORING.</p>
	<p>A closed loop system (which operator has indicated on the Form 2A) must be implemented during drilling. All cuttings generated during drilling with high chloride mud must be kept in containers or on a lined/bermed portion of the well pad; prior to analysis and/or offsite disposal.</p> <p>The moisture content of any drill cuttings in a cuttings area or pile shall be as low as practicable to prevent accumulation of liquids greater than de minimis amounts.</p> <p>Flowback and stimulation fluids must be sent to tanks, separators, or other containment/filtering equipment before the fluids can be placed into any pipeline, storage vessel, or lined pit (only if an amended Form 2A has been submitted/approved and a Form 15 Earthen Pit Permitted has been submitted/approved) located on the well pad; or into tanker trucks for offsite disposal. The flowback and stimulation fluid tanks, separators, or other containment/filtering equipment must be placed on the well pad in an area with additional downgradient perimeter berming. The area where flowback fluids will be stored/reused must be constructed to be sufficiently impervious to contain any spilled or released material.</p>

## **Best Management Practices**

No	BMP/COA Type	Description
1	Planning	<p>A Kinder Morgan Fire Mitigation Plan is currently on file with the Montezuma County Planning Office.</p> <p>Any material not in use that might constitute a fire hazard will be removed a minimum of 25 feet from the wellhead, tanks and separator.</p> <p>Any electrical installations inside the bermed area will comply with API RP 500 classifications and comply with the current national electrical code as adopted by the State of Colorado.</p>
2	Traffic control	<p>A Road Use Plan, which addresses traffic concerns specific to the CN-4, is currently on file with Montezuma County. The traffic plan was produced after consulting with the county Road and Bridge Supervisor.</p> <p>All access roads are fully compliant with local county road standards. Access roads are composed of compacted gravel. In an effort to mitigate dust, magnesium-chloride applications to the road surface are performed at the request of Montezuma County.</p>
3	General Housekeeping	<p>Erosion control barriers, namely fiber wattles, will be placed at the edge of disturbance where necessary. Care will be taken to avoid disturbance outside of the project area unless it is deemed necessary for equipment stability and fire safety.</p> <p>On-site trash dumpsters are emptied regularly by the local waste management company.</p> <p>Steel ranch fencing will be placed around the well head after the well is drilled. Once the well is tied in, the fencing will be removed. The proposed well location will be drilled using a closed loop system and will therefore not use open pits. During drilling and completion operations, safety officers are present on location to ensure that livestock, wildlife, and unauthorized personnel do not enter the location. Following completion, the only items present on the well pad are the well head and aboveground pipeline junction. Additionally, there is no active grazing near the proposed location.</p>
4	Storm Water/Erosion Control	<p>Diversion ditches will be implemented to divert run-on and run-off around the well pad. Compacted earthen berms will also be utilized to control stormwater run-on and run-off.</p> <p>Tackifier will be added to the stored topsoil piles and all slopes to prevent erosion. Stockpiled soils will have slopes not greater than 3:1.</p> <p>Stormwater BMPs will be maintained/amended by Kinder Morgan as site conditions change throughout the construction and reclamation process.</p>
5	Material Handling and Spill Prevention	<p>The use of a closed-loop drilling system will reduce the amount of waste produced and water used during drilling operations. Solid cuttings will be disposed of at a licensed disposal facility.</p> <p>Recycled water will be disposed of in a Class I disposal well.</p> <p>Sufficiently impervious containment devices will be constructed around any condensate and produced water tanks. The containment devices will be sufficiently impervious to contain any spilled or released material. All containment devices will be inspected at regular intervals and maintained in good condition.</p> <p>All loadlines are capped.</p> <p>Tanks are designed to meet all API 650 guidelines.</p>
6	Construction	<p>All equipment will be stored within the right-of-way (ROW) area of disturbance. Top soil will be removed to create a level pad for drilling and access road (ROW: 50').</p> <p>Vegetation that does not need to be removed will be avoided during construction and removed vegetation will be cut near ground level, leaving the root system intact except where permanent facilities, roads, or ROWs require the complete removal of vegetation.</p>

7	Noise mitigation	During normal operations, the well will remain within COGCC regulations for noise. However, during the construction phase of the project, this standard may be exceeded occasionally.
8	Emissions mitigation	Non-flammable CO2 will be produced from the Leadville formation and thus green completion per rule 805 (3) does not apply.  All CO2 wells are equipped with a CO2 leak detection monitor during drilling.
9	Drilling/Completion Operations	Blowout preventer equipment (BOPE) complies with COGCC equipment regulations.  Mineral Management certification or Director approved training for blowout prevention has been conducted for at least one person at the well site during drilling operations.  Kinder Morgan conducts a BOPE test and files a 24 hour notice (Form 42) at the initial rig-up time, after each casing emplacement, and/or every 30 days.  KM standard operating protocol includes a check list for well-site clearance activities when a well is transferred from the Drilling Department to the Operations Department.  Adequate blowout prevention equipment is used on all well servicing operations.  Backup stabbing valves are used on well servicing operations during reverse circulation and are pressure tested before each well servicing operation using both low-pressure air and high-pressure fluid.  No pits are present at the well site.
10	Interim Reclamation	Surface roughening, surface contouring, seeding, and weed control will be employed to facilitate vegetation reestablishment. Tackifier will be added to reclaimed areas.
11	Final Reclamation	All disturbed areas that are not necessary for operational procedures will be restored to at least 80 percent of pre-disturbance vegetative cover.

Total: 11 comment(s)

### **Attachment Check List**

<b><u>Att Doc Num</u></b>	<b><u>Name</u></b>
2106872	CORRESPONDENCE
2518804	PROPOSED BMPs
400489294	FORM 2A SUBMITTED
400498816	NRCS MAP UNIT DESC
400503373	OTHER
400503473	TOPO MAP
400503475	CONST. LAYOUT DRAWINGS
400503476	LOCATION PICTURES
400503477	REFERENCE AREA PICTURES
400503481	SURFACE PLAN
400503841	PROPOSED BMPs
400503842	ACCESS ROAD MAP
400503843	HYDROLOGY MAP
400503844	LOCATION DRAWING
400503845	REFERENCE AREA MAP
400503846	SENSITIVE AREA MAP
400503847	OTHER
400503848	OTHER
400513765	WELL LOCATION PLAT

Total Attach: 19 Files

## General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final review completed; no LGD or public comment received.	2/3/2014 12:43:13 PM
Permit	Water sampling rule for this location changed from N/A to Rule 609 as revised on the form 2A. Rule 609 is the correct selection for this permit as stated by COGCC location assessment staff.	1/31/2014 10:45:39 AM
OGLA	Initiated/Completed OGLA Form 2A review on 01-09-14 by Dave Kubeczko; place notification, H2S training, GW baseline sampling, fluid containment, spill/release BMPs, chemical storage and secondary containment, closed loop, cuttings low moisture content, cuttings containment, pipeline, and flowback to tanks COAs on Form 2A; sent email to operator on 01-09-14 indicating Form 2A COAs; no CPW; passed Form 2A review on 01-30-14 by Dave Kubeczko; notification, H2S training, GW baseline sampling, fluid containment, spill/release BMPs, chemical storage and secondary containment, closed loop, cuttings low moisture content, cuttings containment, pipeline, and flowback to tanks COAs.	1/9/2014 2:31:29 PM
Permit	Passed completeness.	12/11/2013 3:44:52 PM

Total: 4 comment(s)